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made all the illustrations for Dr. Gray's *Genera of the Plants of the United States*, and in that work the cells of *Sarracenia* are correctly represented as opposite the sepals. M. De Candolle asks, "Has he committed an error in the plate of the *Darlingtonia*?" "Considering his usual accuracy, I doubt it. On the other hand, it "is difficult to believe in contrary symmetries in genera so closely "allied. I have discovered a similar fact in the family of Camp-
"nulaceæ, and it has enabled me to establish several genera, which
"are, besides, indicated by their external appearance. The thing,
"then, is not without a parallel, though it is very rare, and should
"be well examined before being admitted. I would, therefore, point
"out to American botanists, and particularly to Dr. Torrey, the
"great importance of verifying fig. 1 of Sprague's plate."

In making the details of the original drawing, Mr. Sprague had at his disposal only a single flower of a dried specimen, and it was not until recently that I have been able to test, in a satisfactory manner, the accuracy of his analysis. It is known to most of our botanists, that after waiting many years to see the plant in a living state, we have, through the kindness of the brothers Messrs. Henry, who reside near where it grows abundantly in California, and by the liberality and prompt action of Messrs. Wells, Fargo & Co's Express, received fresh living specimens, several of which have flowered. I am now able to state that Mr. Sprague has shown "his usual accuracy" in all the details of his drawing. The cells of the ovary are *alternate* with the sepals. Indeed, I have found scarcely any thing to add or alter, now that we have the living plant for comparison.

The theoretical structure of the flower of *Darlingtonia*, we think, accords with what is actually the case. The stamens are in a single series, and are mostly about 15 in number. If we assume that they represent only five, each by collateral chorisis increased to three, they will form a verticil alternating with the petals, so that they will necessarily alternate with the carpels also. In *Sarracenia* the stamens are in a double series, and probably, as in *Darlingtonia*, multiplied by chorisis; the two verticils alternating with each other, so that the carpels, in this view, will be opposite the sepals.

COLUMBIA COLLEGE, April 11th, 1871.

25. *Broussonetia*.—Early in May last I witnessed a remarkable phenomenon in connection with the inflorescence of *Broussonetia papyrifera*. It was about 9 A. M., and the morning sun was just coming over the roof of an adjacent house and striking the branches of the tree, of which the leaves were not yet out, but the catkins were fully formed, though unexpanded. As I casually observed it, I was struck by seeing a light cloud, apparently of smoke, floating amid the branches. I imagined that it must come from some neighboring chimney; but, upon attentive observation, no such smoke could be discerned. There was no smoking chimney near; nor, in a city where anthracite is so generally burned, is it ever easy to find one.

The smoke appeared for a moment, drifted away with the wind,

and yet reappeared as rapidly as it vanished. I soon saw that it arose from no foreign source, but was connected with the tree itself; for two or three small clouds would suddenly appear in nearly as many different parts of the tree at nearly the same moment; and as each would be driven off and dispersed a new one would appear elsewhere. These puffs of smoke were all of nearly uniform size, each perhaps as large as that which is made by the lighting of a lucifer match. They were entirely confined to the tree, not a particle being visible beyond its outline, and appeared throughout its whole extent.

I watched the phenomenon for some time, till I became entirely satisfied that the seeming smoke really proceeded from the tree itself, and that it could be nothing else than the pollen, from the catkins which opened with a sudden explosion in the rays of the sun.

The phenomenon continued in full activity as long as I was at liberty to observe it, and when I was obliged to leave the spot, after some ten minutes of observation, the process was still going on, two or three of the little puffs constantly appearing in widely separated branches at every instant.

B. N. MARTIN.

26. *Presses*.—I have been interested in your remarks on the size of holders etc. They were very opportune. I am satisfied that we should have more herbariums, if young collectors had more instruction on this subject.

I have often thought of describing my press. I have used the lever and the screw press both, and prefer the one I have now to either: it consists of two pieces of pine boards, 12×17 inches, and half a dozen stones, weighing from 5 to 10 lbs. each. The advantage of this simple contrivance is, that it is cheap and within the means and ingenuity of any one, and that it constantly acts by force of gravity.

I have besides $\frac{1}{2}$ dozen pieces of *Binder's Boards*, well painted, to put between fresh and partly cured plants. Several presses can be substituted, or bits of board can be used instead of Binder's Boards, when cheapness is an object.

I make pads or driers by cutting newspapers to the size of the boards of the press, and fastening 8 thicknesses together by stitching the corners with strong thread. O. R. WILLIS, White Plains.

27. *Cerastium vulgatum*, L.—grows sparingly on the rocks on the Westchester side of Harlem River, east of McComb's Bridge.

28. *Exchanges*.—A correspondent in England wishes to exchange mosses and marine algæ. It seems that packets can be sent by book post at a moderate charge.

29. *Note Books*.—Always take a note book on a botanical excursion. Many observations may thus be preserved which would lose their value if trusted to uncertain memory.

Terms—One dollar for one copy; five dollars for seven; and half a dollar for every additional copy, per annum.

Local Herbarium, 3, E. 33d St.—Editor, 224, E. 10th St.